

WHAT IS CLAIMED IS:

1. A method of operating an on-the-shelf inventory management system, the system having a current reporting period table  
5 that has a number of rows, a number of columns, and a number of fields, each field having an initial value, the method including the steps of:
- collecting a plurality of transaction data blocks;  
constructing a temporary table having a plurality of fields that  
10 correspond with the current reporting period table, and processing the plurality of transaction data blocks to determine a calculated value for each field in the temporary table;
- adding each calculated value of a field in the temporary table to an existing value in a corresponding field in the current reporting period  
15 table; and
- determining, for each item in the current reporting period table, if an alert condition exists, and issuing an alert when an alert condition exists.
- 20 2. The method of claim 1 and further comprising the step of returning to the collecting step to collect a next plurality of transaction data blocks.
3. The method of claim 1 and further comprising the steps of:  
25 initializing each field in the current reporting period table before the collecting step;
- determining if a current reporting period is over;
- when the current reporting period is not over, returning to the collecting step; and

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when the current reporting period is over, returning to the initializing step.

4. The method of claim 3 wherein a variable  $n$  is set to an initial value in the initializing step, and the plurality of transaction data blocks are collected every  $n$ th time period.

5. The method of claim 4 and further comprising the steps of:  
determining if a number of transaction data blocks have been  
10 stored in an external memory;  
copying the transaction data blocks from the external memory to an internal memory when the number of transaction data blocks have been stored in the external memory;  
determining whether an  $n$ th time period has expired after the  
15 transaction data blocks have been copied, or when the number of transaction data blocks has not been stored in an external memory;  
returning to the determining step when the  $n$ th time period has not expired; and  
moving to the constructing temporary table step when the  $n$ th  
20 time period has expired.

6. The method of claim 5 and further comprising the step of incrementing the variable  $n$  after the determining, for each item step.

25 7. The method of claim 1 wherein the determining, for each item step includes the steps of:  
outputting a database request to a database;  
receiving a measurement number from the database;

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comparing the measurement number with an existing value in the current reporting table to form a difference value;

determining whether the difference value falls within a predetermined acceptance range; and

- 5           issuing an alert command when the difference value does not fall with the predetermined acceptance range.

8.       The method of claim 7 and further comprising the steps of:  
determining if more items remain to be compared after issuing  
10   the alert command, or when the difference value does fall with the predetermined acceptance range; and  
returning to the outputting step when more items remain to be compared.

9.       The method of claim 7 and further comprising the steps of:  
determining whether an alert command has been received, the  
alert command identifying an item;  
when an alert command is received, determining whether the  
item identified by the alert command has been blocked;  
20   when the item has not been blocked, issuing an alert.

10.      The method of claim 9 wherein the alert includes a page.

11.      The method of claim 9 wherein the alert includes an e-  
25   mail.

12.      The method of claim 9 and further comprising the step of adding an identifier and a time stamp to an alert log to record the alert.

13. The method of claim 12 and further comprising the steps of:

determining whether a response to an alert has been received;  
when a response to an alert is received, identifying the sender,  
5 determining a type of response, and adding a record to the alert log;  
determining whether the response is of a predetermined type;  
and

when the response is of the predetermined type, adding the item  
that corresponds with the alert to a blocked log.

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14. The method of claim 13 wherein the predetermined type  
includes an out-of-stock condition.

15. The method of claim 13 and further comprising the steps  
15 of:

determining whether an alert has been received;  
when an alert has been received, inspecting a shelf location that  
corresponds with the item that corresponds with the alert;  
selecting a descriptor to describe a condition of the shelf location;  
20 transmit descriptor back to alert device; and  
taking necessary corrective action.

16. The method of claim 1 and further comprising the steps of:  
determining whether an alert has been received;  
25 when an alert has been received, inspecting a shelf location that  
corresponds with the item that corresponds with the alert;  
selecting a descriptor to describe a condition of the shelf location;  
transmitting the descriptor back to the alert device; and  
taking necessary corrective action.

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17. A method of operating an on-the-shelf inventory management system, the system measuring a number of units of an item that has been sold, and outputting an alert when the number of  
5 units of the item that has been sold falls below a statistical measure of a number of units that are expected to have been sold, the method including the steps of:

determining whether an alert has been received;  
when an alert has been received, inspecting a shelf location that  
10 corresponds with the item;  
selecting a descriptor to describe a condition of the shelf location;  
transmitting a descriptor back to the system.

18. The method of claim 17 and further comprising the step of  
15 taking necessary corrective action.

19. An on-the-shelf inventory management system, the system having a current reporting period table that has a number of rows, a number of columns, and a number of fields, each field having an initial  
20 value, the system comprising:

a computer having:  
means for collecting a plurality of transaction data blocks;  
means for constructing a temporary table having a plurality  
of fields that correspond with the current reporting period table, and  
25 processing the plurality of transaction data blocks to determine a calculated value for each field in the temporary table;

means for adding the calculated value for each field in the temporary table to an existing value in each corresponding field in the current reporting period table; and

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means for determining, for each item in the current reporting period table, if an alert condition exists, and issuing an alert when an alert condition exists.

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